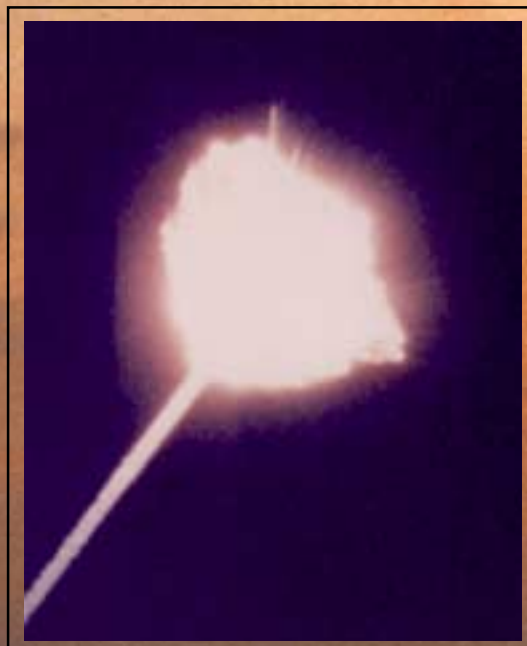


NAVAL SEA SYSTEMS COMMAND

Missile Warheads



NAVAL SURFACE WARFARE CENTER

DAHLGREN DIVISION

DAHLGREN PANAMA CITY DAM NECK

Mission

For over five decades, the Naval Surface Warfare Center, Dahlgren Division (NSWCDD) has conducted research and development (R&D) for Navy warheads. In 1991, the Navy consolidated missile warhead leadership at NSWCDD. Within the Dahlgren Division, this role is assigned to the Missile Warheads Branch at the Dahlgren Laboratory. NSWCDD stresses a systems approach to ordnance development—bringing together the warhead, fuze, and safe and arm elements as well as lethality and missile system implications.

Our mission is to:

- Provide technical counsel to the Navy, Army, and Air Force; Office of Naval Research (ONR); and other government agencies as requested.
- Support development of appropriate investments for ordnance applications.
- Foster the development of warhead technology in the Department of Energy (DoE), private industry, and academia.
- Conduct a balanced program of warhead technology development.
- Conduct or support engineering and manufacturing development programs for missiles.
- Assure appropriate support for production and Fleet use.

Products

Our major achievements include:

- **TOMAHAWK:** Development of Bullpup B warhead (1960s)
- **Penguin:** Development of Bullpup A warhead (1960s)
- **Phoenix:** Development and support of MK 82 and WDU-29B warheads (1960s – 1990s)
- **SPARROW:** Development of WAU-17B warhead (1970s – 1980s)
- **STANDARD:** Development and support of MK 51, MK 90, MK 115, and MK 125 warheads (1970s – 1990s)
- **Evolved SEASPARROW:** Development of MK 139 warhead (1990s)
- **PATRIOT:** Advanced prototyping of PAC-3 warhead (1990s)
- **Zuni Rocket:** MK 32 warhead (1960s)
- **SDI:** Flight Termination Ordnance (1980s)
- **Tech Base:** Development of many technologies to support warhead developments

Roles

We support various warhead development roles including:

- Technical Direction Agent
- Design Agent
- Acquisition Engineering Support

We also conduct specific tasks such as:

- Technical Principal for Air and Surface Weapons Tech Warheads
- Ordnance Manager for Insensitive Munitions Advanced Development
- National Panel Membership of:
 - DoD/DoE Munitions Technologies Development Programs
 - Joint Director of Laboratories, Warheads, and Explosives Subpanel
 - National Defense Industrial Association
- Special technical studies

Capabilities

We maintain numerous facilities and tools to enhance our work:

- Computational and Analysis Tools

EIPC 90	PATRAN	CTH
ABAQUS	DYNA 2D/3D	SMERF
ProEngineer	BLASTINW	SPHINX
MAGI		
- Complete Computer Aided Design Facilities
- Laboratories
 - Light Gas Gun Laboratory
 - Structures Laboratory
 - Warhead Assembly Laboratory
 - Analysis Laboratories

We also use the following Dahlgren Laboratory facilities to conduct arena testing and cook-off, drop, bullet impact, flash x-ray, and other tests.

- Explosive Research Laboratory (Small Scale)
- Explosive Research Laboratory (Full Scale)
- Industrial Radiography



People. . . Our Greatest Asset

Within a little more than half a century, we have entered a number of new ages: the atomic age, the computer age, and the space age. In comparison with the preceding fifty years, technological development during the twentieth century seems rapid indeed. To keep pace with this process of growth, the Missile Warheads Branch blends a mixture of senior professionals, as well as young professionals and technicians, to form a dynamic organization. As of 1999, the Branch boasts over 500 years of combined experience. This fusion of knowledge provides a strong foundation for the continuous evolution of missile warhead technology.

We have a balanced staff of:

- Mechanical, Chemical, Aerospace and Material Engineers
- Physicists
- Engineering Technicians
- Co-op Students

with degrees ranging from the Bachelor of Science to the Ph.D.



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For additional information, please contact:

NSWCDD Public Affairs

Telephone: (540) 653-8153

Internet: www.nswc.navy.mil

We are looking for scientists and engineers in different fields. For employment opportunities, please send your resume to:

NSWCDD College Recruiting Program

Human Resources Department, Code PD

17320 Dahlgren Road

Dahlgren, VA 22448-5100

Telephone: 1-800-352-7967

E-mail: recruit@nswc.navy.mil

Internet: www.nswc.navy.mil/P/RECRUIT/recruit.html